



Europäisch s Patentamt
European Patent Office
Office européen des brevets



(11) **EP 0 711 731 A3**

(12) **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:
19.02.1997 Bulletin 1997/08

(51) Int. Cl.⁶: **C02F 1/78**

(43) Date of publication A2:
15.05.1996 Bulletin 1996/20

(21) Application number: **95308054.6**

(22) Date of filing: **10.11.1995**

(84) Designated Contracting States:
DE FR GB

(30) Priority: **11.11.1994 JP 303047/94**
11.11.1994 JP 303046/94

(71) Applicant: **KABUSHIKI KAISHA KOBE SEIKO**
SHO
also known as **Kobe Steel Ltd.**
Kobe 651 (JP)

(72) Inventors:
• **Shiota, Hirokazu,**
Shugetsu Building 506
Tokyo 107 (JP)

• **Kurihara, Kazuo,**
c/o Nishimatsu Construc. Co. Ltd.
Yamato-shi, Kanagawa (JP)
• **Takagi, Yasuyuki,**
c/o Takasago Works In Kobe
Takasago-shi, Hyogo, 676 (JP)

(74) Representative: **Woodcraft, David Charles et al**
BROOKES & MARTIN
High Holborn House
52/54 High Holborn
London, WC1V 6SE (GB)

(54) **Ozone water production apparatus**

(57) Provided is an ozone water production apparatus capable of easily continuously obtaining ozone water having a high concentration by a water electrolytic process using a noble metal electrode which has been considered to have a low ozone generation efficiency without using a lead compound. An ozone water production apparatus in which an anode electrode and a cathode electrode to which a DC voltage is applied are put upon one surface and the other surface, respectively, of a solid electrolytic film, and water supplied to the anode electrode side is subjected to electrolysis to obtain ozone water, wherein a wire net made of noble metal having an ozone generation catalyst function is used as the anode electrode, and a lath net made of corrosion resistant metal is put upon the outer surface side of the anode electrode, the anode electrode and the lath net being sealed into a jacket having a water inlet on one end and an ozone water outlet on the other end thereof.

EP 0 711 731 A3



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 95 30 8054

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
X	PATENT ABSTRACTS OF JAPAN vol. 013, no. 061 (C-567), 10 February 1989 & JP-A-63 250480 (N V SHIHI:KK), 18 October 1988, * abstract; figure *	1,14	C02F1/78 C25B1/00
Y	---	17	
A	---	6,8	
Y	DE-A-42 27 732 (FISCHER LABOR UND VERFAHRENSTE) 24 February 1994 * the whole document *	17	
A	---	5,7	
A	PATENT ABSTRACTS OF JAPAN vol. 018, no. 658 (E-1643), 13 December 1994 & JP-A-06 260181 (MITSUBISHI HEAVY IND LTD), 16 September 1994, * abstract *	2-4,15	
A	WO-A-93 24677 (UNITED TECHNOLOGIES CORP) 9 December 1993 * page 1, line 8 - page 2, line 21 * * page 5, line 3 - line 13 * * figures 1,2 *	3,6,8	TECHNICAL FIELDS SEARCHED (Int.Cl.6) C25B C02F
A	US-A-5 205 994 (SAWAMOTO ET AL) 27 April 1993 * the whole document *	9,10,12,13	
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 17 December 1996	Examiner Ruppert, G
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document I : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

EPO FORM 1303 (01.92) (P4/C01)